

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1.-7. (Cancelled)
8. (Original) A semiconductor substrate support, comprising:
a chuck configured to change between a compliant state and a rigid state; and
an electromagnetic field source configured to apply an electromagnetic field to the chuck, the electromagnetic field causing the chuck to change from the compliant state to the rigid state.
9. (Original) The support of claim 8, further comprising:
a channel extending through the chuck.
10. (Original) The support of claim 8, wherein the chuck further includes,
an outer membrane; and
a fluid defined within the outer membrane.
11. (Original) The support of claim 10, wherein the fluid is a magnetorheological fluid.
12. (Original) The support of claim 10, further comprising:
a semi-conductive polymer material disposed on an outer surface of the outer membrane.

13. (Original) The support of claim 12, wherein the semi-conductive polymer material acts as an electrostatic chuck.
14. (Original) The support of claim 9, wherein the channel is a vacuum channel.
15. (Original) A planarization module, comprising:
a rotatable semiconductor substrate support configured to support a substrate, the substrate support configured to alternate between a compliant state and a rigid state;
a rotatable planarizing surface disposed over the substrate support; and
an electromagnetic field source configured to apply an electromagnetic field proximate to the substrate support.
16. (Original) The planarization module of claim 15, further comprising:
a vacuum source configured to supply vacuum to a channel defined through the substrate support.
17. (Original) The planarization module of claim 15, wherein the substrate support includes,
an outer membrane having a fluid defined therein, the fluid configured to change viscosity in response to the electromagnetic field being applied to the substrate support.
18. (Original) The planarization module of claim 15, wherein the rotatable planarizing surface is a grinding wheel.

19. (Original) The planarization module of claim 15, wherein the rotatable planarizing surface is configured to orient the substrate in the substrate support while the substrate support is in the compliant state.

20. (Original) The planarization module of claim 17, wherein the fluid is a suspension that includes one of a magnetic and a magnetorheological material.

21. (Original) The planarization module of claim 15, wherein the substrate support includes,

an outer membrane having a polymer defined therein, the polymer configured to change compliance in response to the electromagnetic field being applied to the substrate support.

22. (Original) The planarization module of claim 21, wherein the polymer is a matrix that includes one of a magnetic and a magnetorheological material.

23. (New) A semiconductor substrate support, comprising:

a chuck having a membrane that is filled with a magnetorheological fluid and a surface of the membrane configured to receive a semiconductor substrate, wherein the magnetorheological fluid is configured to change between a compliant state and a rigid state; and

an electromagnetic field source configured to apply an electromagnetic field to the chuck, the electromagnetic field causing the magnetorheological fluid to change from the compliant state to the rigid state.